

REMARKS

Reconsideration and allowance of this application are respectfully requested. Claims 1-59 are pending in the application. The rejections are respectfully submitted to be obviated in view of the remarks presented herein.

Objection to the Drawings

FIGS. 2 and 5 have been objected to for minor informalities. In response, labels have been inserted in the boxes of FIG. 2 according to the descriptions in the specification, and the circles have been removed from the reference elements 1, 2 and 3. Additionally, FIG. 5 is corrected to now show separate FIGS. 5A and 5B. A new Fig. 6 has also been added illustrating the method of transmitting a bit stream as claimed in claims 1-4 and 7-10. Accordingly, the Examiner is now requested to withdraw the outstanding objections to the drawings.

Objection to the Specification

The specification has been objected to for allegedly failing to provide proper antecedent basis for the claimed subject matter. Applicants refer the Examiner to 37 C.F.R. § 1.75(d)(1), which recites an antecedent basis requirement for the claims, but does not mention such a requirement for the specification. Additionally, Applicants believe the specification does provide proper antecedent basis and clear support for the claims. Specifically, the “including several layers” recitation on page 9, lines 21-23 and page 10, lines 1-2 is described in more detail on page 10, lines 3-8 and page 12, line 18 to page 13, line 12 of the specification. The wireless terminal 510, base station 560 and inter working function 570 are disclosed to each include several layers, with specific details as described on page 10, lines 3-8. Page 11, lines 2-3 of Applicants’ specification unambiguously discusses the use of UNACK and ACK protocols for transmission of the video bit stream through the UDP and TCP, respectively.

Regarding Examiner’s objections for minor informalities, page 1, line 15 of the specification, as amended, recites “packetized according to a request for comments (RFC) protocol.” A request for comments (RFC) archival is a publication process which covers Internet

standards including protocols. Packetization according to RFC protocol is understood by those skilled in the art. Applicants also submit that the use of the terms “transceiving” and “transceived” are not incompatible with the use of terminology throughout the claims and title of the invention. Accordingly, the Examiner is now requested to withdraw the outstanding objection to the specification.

Rejection Under 35 U.S.C. § 103(a) - Ludwig et al. in view of Zhu and Iizuka et al.

Claims 1-28 and 32-59 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ludwig et al. (U.S. Patent Number 6,697,352 B1; hereinafter “Ludwig”) in view of Zhu (U.S. Patent Number 6,154,780) and Iizuka et al. (U.S. Patent Number 5,699,521; hereinafter “Iizuka”). The rejection is respectfully traversed.

Regarding claims 1, 2, 32 and 33, the claimed invention relates to a method of transmitting a bit stream in a communication network. Source data is coded into the bit stream using a predetermined type of coding. A header is added from each communication protocol layer to a payload while transmitting the coded bit stream to each communication protocol layer. The header is transmitted separately from the transmitted bit stream, as recited in claims 1 and 32. Similarly, claims 2 and 33 recite “separately transmitting the payload and the header.”

Turning to Ludwig, the concept of encapsulation, whereby a packet of a higher layer is embedded in a larger packet of a lower layer, is shown in Figure 5. Data is passed through layers of protocol, whereby the resulting packet is a frame with headers added at each layer. However, Ludwig does not mention transmitting the header separately from the bit stream/payload. Additionally, Examiner readily admits that Ludwig also fails to disclose coding source data into the bit stream using a predetermined type of coding.

Zhu does not remedy the deficiencies of Ludwig. Zhu does not disclose at least separately transmitting the header and the bit stream/payload, as claimed. Zhu teaches real-time transmission of coded digital video signals and segmentation of a digital video bitstream into transport protocol packets (column 1, lines 16-32). Encapsulation is performed using an encoded digital video bitstream (column 1, lines 33-34). However, Examiner also admits that “both

Ludwig and Zhu do not disclose transmitting the header separately from the bit stream transmitted in the step of adding a header from each communication protocol layer to a payload while transmitting the bit stream coded from a coding source data.”

Examiner maintains that the combination of Ludwig in view of Zhu and Iizuka render the claimed invention obvious. However, Iizuka also does not teach transmitting the header separately from the transmitted bit stream/payload. Iizuka discloses prioritizing the processing of data such that data needing real time processing is given a higher priority than other data that may be delayed in processing (column 1, lines 6-13). In Iizuka, “a data send or receive process order is decided for each data from priority decision information of the send or receive data and priority data information registered in advance” (column 2, lines 13-18). Priority decision information stored in a protocol header is used to decide which data should have priority over others when subject to send and receive processes. Data to be sent or received is segmented into priority levels, and priority decision information is stored into the protocol header of each of the segmented data (column 3, lines 2-15). The send or receive process is thus controlled depending on the priorities of each of the segmented data. Iizuka’s process decides the send or receive process orders of send or receive data with priority decision information stored in the header of each segmented data (column 3, lines 41-49). However, the segmenting of data in Iizuka refers to the prioritizing of the data into priority groups, not the separate transmission of the header and bit stream/payload, as claimed.

At least by virtue of the aforementioned differences, the invention defined by claims 1, 2, 32 and 33 are patentable over Ludwig in view of Zhu and Iizuka. Further, dependent claims 3-28 and 34-59 are patentable over Ludwig in view of Zhu and Iizuka at least by virtue of their dependency on claims 1, 2, 31 and 33 as well as for their additionally recited features. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) are respectfully requested.

Rejection Under 35 U.S.C. § 103(a) - Ludwig et al. in view of Zhu

Claims 29, 30 and 31 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ludwig in view of Zhu. The rejection is respectfully traversed.

Regarding claim 29, the combination of Ludwig and Zhu do not disclose every element as claimed. The claimed invention recites “a packet processing unit for transmitting the bit stream processed by the protocol processing unit in an unacknowledged mode protocol and transmitting the header information in an unacknowledged or acknowledged mode protocol.” However, even though Ludwig mentions sending UDP packets in an unnumbered mode and TCP packets in a numbered mode, whereby the UDP does not provide for retransmission of corrupted packets, there is still no mention in Ludwig or Zhu of transmitting the bit stream in an unacknowledged mode protocol, and transmitting the header information in an unacknowledged or acknowledged mode protocol, as claimed. Ludwig’s communication only sends packets already designated as UDP or TCP by their respective reliability modes (column 6, lines 9-45).

At least by virtue of the aforementioned differences, the invention defined by claim 29 is patentable over Ludwig in view of Zhu. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) are respectfully requested.

Regarding claim 30, the combination of Ludwig and Zhu do not disclose every element as claimed. The claimed invention recites “an extractor for separately extracting payloads and header information which corresponds to the header of each layer, while transmitting a bit stream received in a separate transmission protocol in the communication network to each layer.” As discussed above, Ludwig does not teach transmitting the bit stream in an unacknowledged mode protocol, and transmitting the header information in an unacknowledged or acknowledged mode protocol. Thus, Ludwig is also incapable of, and further does not separately extract payloads and header information while transmitting a bit stream received in a separate transmission protocol, as claimed. Ludwig’s discrimination of received packets is accomplished according to rules of particular classifications determined by checking individual headers. However, the headers are not transmitted separate from the bit stream.

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At least by virtue of the aforementioned differences, the invention defined by claim 30 is patentable over Ludwig in view of Zhu. Further, dependent claim 31 includes all of the limitations of independent claim 30, which, as established above, patentably distinguishes over Ludwig in view of Zhu. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) are respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.


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